

# High Risk Emergenices: Assessment and Management Online Course



<b>Author</b>	Dr Peter Stuart FACEM MPH DRACOG Grad Cert (ClinSim)
<b>Peer Review</b>	Dr Tim Burrough RACGP, CertEM, Dr Joy Treasure RACGP CertEM, Dr Jason Bament FRACGP FACRRM DipEM
<b>Latest Review</b>	June 2021
<b>Accreditation:</b>	RACGP (Activity Number 207929) & ACRRM (Activity Number: 20477) for the 2020-2022 triennium

The RESP-High Risk Emergency Program has been developed to provide CPD in the recognition, workup and management of emergency presentations associated with the risk for serious / life threatening illness. While the "RESP-Critical Care" and "RESP-Paediatric" workshop programs focus on the assessment and management of Triage Category One patients, this course examines the patients generally triaged as category two or three (or even sometimes category four) where serious disease needs to be considered.

The course explores the "red flags" associated with a specific presentation that indicate an increased risk for serious disease and discusses the workup and emergency management of these patients. The program aims to increase confidence in identifying adults where serious disease is a major consideration and initiate emergency management in these patients.

## Learning Outcomes:

### At the completion of the workshop the participants should be able to:

1. Prioritise the steps in the assessment, continuing evaluation and management of the patient presenting a high risk clinical presentation
2. Structure the assessment and management of the patient presenting with *acute anaphylaxis*
3. Differentiate the red flags, differential diagnosis, use of investigations and management of serious illness in the patient presenting with *acute chest pain*.
4. Discriminate the red flags, differential diagnosis, use of investigations and management of serious illness in the patient presenting with *acute headache*.
5. Differentiate the red flags, differential diagnosis, use of investigations and management of serious illness in the patient presenting with *fever/sepsis*.
6. Discriminate the red flags, differential diagnosis, use of investigations and management of serious illness in the patient presenting with *acute abdominal pain*.
7. Differentiate the red flags, differential diagnosis, use of investigations and management of serious illness in the patient presenting with *dyspnoea*.
8. Discriminate the red flags, differential diagnosis, use of investigations and management of serious illness in the patient presenting with *syncope/collapse*.
9. Differentiate the red flags, differential diagnosis, use of investigations and management of serious illness in the patient presenting with *severe agitation*.

## Summary of the e-Learning Program

The e-learning is interactive and requires the clinician to consider a range of the clinical problems and scenarios and provide a response. At the end of each topic a summative quiz is used to evaluate learning and understanding of the topic material. There are five key areas, with a total course time of 16 hours.

The program covers the following areas of emergency practice:

1. Challenges to the delivery of care in the rural setting and accessing clinical support
2. Preparation and Procedure for referral, retrieval and transport of patients
3. Clinical approach and role of bedside testing in the assessment of emergency presentations associated with a high risk for serious disease
4. Identification of “Red Flags” for serious illness in patients presenting with
  - Acute Chest Pain
  - Acute Headache
  - Fever/Sepsis
  - Acute Abdominal Pain
  - Acute Dyspnoea
  - Syncope/Collapse
  - Severe Agitation
5. Specific emergencies discussed in the course include the clinical presentation and emergency management of :
  - Acute Anaphylaxis
  - Acute Myocardial Ischaemia
  - Acute Pulmonary Embolism
  - Acute Subarachnoid haemorrhage
  - Acute Meningitis
  - Acute Migraine
  - Sepsis / Septic shock
  - Acute Surgical Abdomen
  - Acute Pulmonary Oedema
  - Severe Asthma
  - Cardiac Arrhythmia
  - Severe Agitation / Drug Intoxication

# Outline of the Program

## High Risk Emergencies Pre-Quiz (10 mins)

### 1. Clinical Approach to High Risk Presentations

**Module summary:** High risk emergencies describe clinically stable patients who attend for emergency care with a clinical presentation where there is a significant risk that serious disease may be missed and/or critical early intervention delayed. These include patients presenting with acute chest pain, acute headache, acute abdominal pain, fever, syncope, acute respiratory distress or severe agitation. This first topic provides the foundation for the remainder of the course and outlines the core principles for approaching the patient with a high risk presentation with a specific focus on the critical thinking required for diagnosis and treatment in these challenging patients.

#### Interaction/Assessment:

- Video Podcast: Critical Thinking (20 mins)
- Interactive Clinical Case Study: Critical Thinking (Formative assessment: 60 mins)
- Topic Quiz – Critical Thinking (Summative assessment: 30 mins)

### 2. Acute Chest Pain

**Module summary:** Chest pain, although a common presentation, remains one of the most difficult presentations to assess and treat because of the risk of missing life threatening disease. In this topic the approach to the patient with acute chest pain is discussed in detail with the aim of providing a clinical framework to assist the clinician with undertaking assessment and management of patients presenting with acute myocardial ischaemia.

#### Interaction/Assessment:

- Video Podcast: Ischaemic Chest Pain (20 mins)
- Video Podcast: Pulmonary Embolism (30 mins)
- Interactive Clinical Case Study: Acute Chest Pain (Formative assessment: 60 mins)
- Topic Quiz – Acute Chest Pain (Summative assessment: 30 mins)

### 3. Acute Severe Headache

**Module summary:** In this module we will consider the serious causes that need to be considered in acute headache and their distinctive clinical features. The "red flags" for serious disease are reviewed and provide important clues for identifying the patient at high risk for serious disease. The module concludes with a review of the evidence based pharmacological management of migraine and tension headache.

#### Interaction/Assessment:

- Video Podcast: Acute Headache (20 mins)
- Interactive Clinical Case Study: Acute Severe Headache (Formative assessment: 60 mins)
- Topic Quiz – Acute Severe Headache (Summative assessment: 30 mins)

#### 4. Sepsis/Fever

**Module summary:** The possibility of Sepsis needs to be considered in every patient presenting with infection. A low threshold for considering sepsis is required to avoid delayed or missed diagnosis. This is particularly the case in the elderly or immunocompromised patient where presenting symptoms are often non-specific and may include confusion, lethargy, nausea, malaise, syncope and hypothermia. This module explores the presentation, diagnosis, complications and management of the patient with sepsis with an emphasis on early recognition and treatment.

**Interaction/Assessment:**

- Video Podcast: Sepsis (20 mins)
- Interactive Clinical Case Study: Sepsis/fever (Formative assessment: 60 mins)
- Topic Quiz – Sepsis (Summative assessment: 30 mins)

#### 5. Acute Abdominal Pain

**Module summary:** Abdominal pain is the presenting symptom for a wide range of life threatening surgical and medical conditions. The plethora of serious causes and the limitations of history, examination and investigations make assessment and treatment a significant challenge for the clinician and a frequent cause for serious clinical error. This module explores the assessment of the patient with abdominal pain and identifies red flags and clinical examination findings indicating a high risk for serious illness.

**Interaction/Assessment:**

- Video Podcast: Abdominal Pain (30 mins)
- Interactive Clinical Case Study: Acute Abdominal Pain (Formative assessment: 60 mins)
- Topic Quiz – Acute Abdominal Pain (Summative assessment: 30 mins)

#### 6. Severe Dyspnoea/Respiratory Distress (CPAP)

**Module summary:** Respiratory distress is a common presenting symptom in emergency patients. Although there are a wide variety of recognised causes for respiratory distress, in practice a small number of diseases account for the majority of emergency presentations including upper airway obstruction, infection, obstructive airway disease, acute pulmonary oedema, pulmonary embolism, pneumothorax and trauma.

In the case simulation we consider a patient presenting with severe respiratory distress and are required to make a best guess at the diagnosis, initiate specific therapy to treat the condition and explore the role that noninvasive ventilation may have in managing patients with severe respiratory distress.

**Interaction/Assessment:**

- Video Podcast: Acute Respiratory Distress (20 mins)
- Interactive Clinical Case Study: Acute Respiratory Distress (Formative assessment: 60 mins)
- Topic Quiz – Acute Respiratory Distress (Summative assessment: 30 mins)

## 7. Syncope / Collapse

**Module summary:** Collapse is a common presentation to acute care. Although it may result from a benign cause such as vasovagal syncope, the symptom should be treated as a Red Flag for serious disease. A careful search is required for serious or life threatening causes including cardiac arrhythmias, mechanical outflow obstruction (eg. aortic stenosis, HOCM), hypovolaemia / haemorrhage, postural hypotension (eg drugs), metabolic disorders (eg hypoglycaemia) and acute CNS disease (eg. subarachnoid haemorrhage, vertebrobasilar ischaemia).

### Interaction/Assessment:

- Video Podcast: Syncope (25 mins)
- Interactive Clinical Case Study: Syncope/collapse (Formative assessment: 60 mins)
- Topic Quiz – Syncope/Collapse (Summative assessment: 30 mins)

## 8. Managing Severe Agitation

**Module summary:** In the patient presenting with disturbed behaviour, disordered thinking or suspected acute mental illness the initial task is to stabilise the patient with the aim of minimising the risk of harm (to the patient and to others), identify and treat life threatening (medical) disease and reduce patient suffering and anxiety. The management of the agitated or violent patient embraces psychological, physical and pharmacological approaches. In the following topic we explore a clinical case of a patient with severe agitation and risk for violence.

### Interaction/Assessment:

- Video Podcast: Agitated Patient (25 mins)
- Interactive Clinical Case Study: Approach to the Agitated Patient (Formative assessment: 30 mins)
- Interactive Clinical Case Study: Management of the Agitated Patient (Formative assessment: 30 mins)
- Topic Quiz – Agitated Patient (Summative assessment: 30 mins)

## 9. Final Post Course Assessment Quiz

Final Course Quiz 1 – High Risk Emergencies: Assessment and Management (Summative assessment: 30 mins)

Final Course Quiz 2 – High Risk Emergencies: Assessment and Management (Summative assessment: 30 mins)